



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

March 16, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Alcoa, Inc - Warrick Operations / 173-18465-00007

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 9/16/03



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Indianapolis, Indiana 46206-6015

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March 16, 2004

Melvin W. Lager, Jr., VP & Gen. Mgr.
Alcoa, Inc. - Warrick Operations
P.O. Box 10
Newburgh, Indiana 47629-0010

Re: Significant Source Modification No:
173-18465-00007

Dear Mr. Lager, Jr.:

Alcoa, Inc. - Warrick Operations applied for a Part 70 Operating Permit on September 19, 1996 for a primary aluminum processing source. An application for the operation of one (1) groundwater remediation system was received on December 4, 2003. Pursuant to the provisions of 326 IAC 2-7-12, this permit has been processed a significant source modification to a Part 70 Operating Permit that is yet to be issued and is approved as described in the attached Technical Support Document.

The modification requires record keeping for a groundwater remediation system pursuant 40 CFR 7881(c), in order to render the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG (NESHAP for Site Remediation) not applicable.

The Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-12(d).

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Michael S. Schaffer, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395, ext. 15 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original Signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
MSS/MES

cc: File - Warrick County
U.S. EPA, Region V
Warrick County Health Department
Southwest Regional Office
Air Compliance Section Inspector - Richard Sekula
Compliance Branch

COMPANY
WHERE, Indiana

Page 2 of 2
000-0000-00000

Administrative and Development
Technical Support and Modeling - Michele Boner



Joseph E. Kernan

Governor

Lori F. Kaplan

Commissioner

100 North Senate Avenue

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Indianapolis, Indiana 46206-6015

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PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

Alcoa, Inc. - Warrick Operations Junction IN Highways 66 and 61 Newburgh, Indiana 47629

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: SSM 173-18465-00007

Issued by: Original Signed by Paul Dubenetzky
Paul Dubenetzky, Branch Chief
Office of Air Quality

Issuance Date: March 16, 2004

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SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary primary aluminum reduction source.

Responsible Official:	Vice President & General Manager
Source Address:	Junction IN Highways 66 and 61, Newburgh, Indiana 47629
Mailing Address:	Bldg. 860 E, P.O. Box 10, Newburgh, Indiana 47629-0010
General Source Phone Number:	812 - 853 - 1519
SIC Code:	3334
County Location:	Warrick
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to operate the following emission units and pollution control devices:

One (1) groundwater remediation system, located at Building 847 (formerly underground storage tank (UST) farm), consisting of a recovery system for VOC control in groundwater and/or vapor, exhausting to a stack, capacity: less than ten (10) tons of VOC per year.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source modification does not include any insignificant activities as defined in 326 IAC 2-7-1(21).

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B **GENERAL CONSTRUCTION CONDITIONS**

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)] [326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

SECTION C **GENERAL OPERATION CONDITIONS**

C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this approval:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

- (a) Compliance testing on new emission units shall be conducted within 60 days after achieving

maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record Keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

Southwest Regional Office: 812-380-2305, facsimile 812-380-2304

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.

- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record Keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

-
- (a) The reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Ground Water Remediation System

One (1) groundwater remediation system, located at Building 847 (formerly underground storage tank (UST) farm), consisting of a recovery system for VOC control in groundwater and/or vapor, exhausting to a stack, capacity: less than ten (10) tons of VOC per year.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1] [40 CFR 63, Subpart A]

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart GGGGG.

D.1.2 Hazardous Air Pollutants (HAPs) [40 CFR 63.7881(c)(1), Subpart GGGGG]

Pursuant to 40 CFR 63.7881(c)(1), before beginning site remediation, the Permittee shall determine that the remediation material being excavated, extracted, pumped or otherwise removed during the Permittee's site remediation will not contain a total quantity of the HAP listed in Table 1 of 40 CFR 63, Subpart GGGGG equal to or greater than 1 megagram (1.10 tons) per year. Compliance with this condition in combination with Conditions D.1.3(a) and (b) shall render the requirements of CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG not applicable.

Compliance Determination Requirements

There are no specific Compliance Determination Requirements applicable to this emission unit.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

There are no specific Compliance Monitoring Requirements applicable to this emission unit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.3 Record Keeping Requirements [40 CFR 63.7881(c)(2) and (3), Subpart GGGGG]

- (a) Pursuant to 40 CFR 63.7881(c)(2), the Permittee shall prepare and maintain written documentation at the groundwater remediation system to support the determination used to demonstrate compliance with Condition D.1.1. The documentation shall include a description of the Permittee's methodology and data the Permittee used for determining the total HAP content of the material.
- (b) Pursuant to 40 CFR 63.7881(c)(3), the exemption from the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG, may be applied to more than one (1) site remediation as provided that the total quantity of HAPs listed in Table 1 of 40 CFR 63, Subpart GGGGG is less than 1 megagram per year from all site remediations.

Compliance with these conditions in combination with Condition D.1.1 shall render the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG not applicable.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47629-0010
Source Modification No.: SSM 173-18465-00007

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification

Source Background and Description

Source Name:	Alcoa, Inc. - Warrick Operations
Source Location:	Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629
County:	Warrick
SIC Code:	3334
Operation Permit No.:	T 173-6627-00007
Operation Permit Issuance Date:	Not Yet Issued
Significant Source Modification No.:	SSM 173-18465-00007
Permit Reviewer:	Michael S. Schaffer

The Office of Air Quality (OAQ) has reviewed a modification application from Alcoa, Inc - Warrick Operations relating to the operation of the following emission units and pollution control devices:

One (1) groundwater remediation system, located at Building 847 (formerly underground storage tank (UST) farm), consisting of a recovery system for VOC control in groundwater and/or vapor, exhausting to a stack, capacity: less than ten (10) tons of VOC per year.

History

In 1968, the source began operating a underground storage tank (UST) farm to store coil coatings and solvent mixtures. In 1999, the UST farm was then taken out of service and replaced with an above ground storage tank (AST) farm at Building 849. The USTs were emptied, cleaned and abandoned in place in accordance with IDEM guidance and approval from the Indiana State Fire Marshal. The UST farm site was designated as a Solid Waste Management Unit (SWMU) in the RCRA Corrective action portion of Post Closure Permit number IND006366819, due to historical spills, leaks or de minimis losses of coatings and solvents. On August 6, 2002, IDEM approved a Corrective Action Plan from Alcoa which called for a total fluids recovery system to remove both vapor and groundwater from within and adjacent to the former USTs.

As a result, on October 3 and 4, 2003, pursuant to 326 IAC 2-1.1-3(h)(3)(E), Alcoa conducted a remediation study, simulating a normal operating recovery system using EPA Method 25A to assess VOC emissions and HAPs Emissions. Based on the results of the remediation study, the potential to emit VOC from the recovery of both groundwater and vapor, is projected to be no more than 0.295 tons per year. Pursuant to 326 IAC 2-1.1-3(e)(1)(D), since the increase in VOC from the proposed groundwater remediation system is less than ten (10) tons per year, the groundwater remediation is exempt from the requirement to obtain a construction permit. However, in order to render the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG (NESHAP for Site Remediation) not applicable, pursuant to 40 CFR 63.7881(c), Alcoa, Inc. - Warrick Operations must comply with the record keeping requirements of that section. Since record keeping requirements will be required to render the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG not applicable, this Significant Source Modification will be written under the requirements of 326 IAC 2-7-12(d) (Part 70 Significant Permit Modification).

Note that pursuant to 326 IAC 2-7-12(b)(1)(B), the addition of the groundwater remediation system could not qualify as a minor permit modification because the modification would involve significant changes to record keeping requirements if the Part 70 Operating Permit was issued. Thus, the added record keeping would have been considered a significant permit modification pursuant to 326 IAC 2-7-12(d). However, since the source's Part 70 Operating Permit is still pending, a permit modification cannot be written. Therefore, this approval is being written as Significant Source Modification in order to incorporate the record keeping requirements of 40 CFR 63.7881(c) and render the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG not applicable to this source.

Existing Approvals

- (a) Significant Source Modification 173-17780-00007, approval pending;
- (b) Significant Source Modification 173-16034-00007, issued on March 28, 2003;
- (c) Administrative Amendment 173-16991-00007, issued on January 30, 2003;
- (d) Administrative Amendment 173-16685-00007, issued on December 27, 2002;
- (e) Significant Source Modification 173-15661-00007, issued on August 23, 2002;
- (f) Minor Source Modification 173-15352-00007, issued on April 23, 2002;
- (g) Minor Source Modification 173-14944-00007, issued on December 5, 2001;
- (h) Significant Source Modification 173-14145-00007, issued on July 7, 2001;
- (i) Minor Source Modification 173-12886-00007, issued on February 1, 2001;
- (j) Minor Permit Modification 173-12588-00007, issued on October 10, 2000;
- (k) Minor Source Modification 173-12676-00007, issued on October 2, 2000;
- (l) Minor Permit Modification 173-11419-00007, issued on June 9, 2000;
- (m) Significant Source Modification 173-11342-00007, issued on May 22, 2000;
- (n) Significant Source Modification 173-11598-00007, issued on February 3, 2000;
- (o) Administrative Amendment 173-11403-00007, issued on January 28, 2000;
- (p) CP 173-11414-00007, issued on December 15, 1999;
- (q) CP 10913-00007, issued on October 1, 1999;
- (r) Exemption 173-10598-00007, issued on September 20, 1999;
- (s) Minor Source Modification 173-10959-00007, issued on July 15, 1999;
- (t) Exemption 173-10142-00007, issued on October 28, 1998;

- (u) Registration 173-9960-00007, issued on August 6, 1998;
- (v) Registration 173-9574-00007, issued on August 6, 1998;
- (w) Exemption 173-9620-00007, issued on June 17, 1998;
- (x) Exemption 173-9644-00007, issued on May 5, 1998;
- (y) Administrative Amendment 173-8566-00007, issued on May 29, 1997;
- (z) Registration 173-8161-00007, issued on May 19, 1997;
- (aa) Registration 173-8193-00007, issued on May 13, 1997;
- (bb) Administrative Amendment 173-6196-00007, issued on September 27, 1996;
- (cc) Registration 173-6325-00007, issued on August 28, 1996;
- (dd) Administrative Amendment 173-5524-00007, issued on May 6, 1996;
- (ee) Registration 173-5449-00007, issued on April 11, 1996;
- (ff) Administrative Amendment 173-4611-00007, issued on November 30, 1995; and
- (gg) CP173-4501-00007, issued on June 16, 1995.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

This source was not required to submit a stack summary because the groundwater remediation system will operate as an exempt emission unit under 326 IAC 2-1.1-3(e)(1)(D).

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 4, 2003

Emission Calculations

In order to assess VOC and HAPs emissions, Alcoa conducted a remediation study using EPA Method 25A that simulated a normal operating recovery system. This study was conducted on October 3 and 4, 2003. The average VOC emission rate recorded during that study was 0.0675 pounds per hour.

The unrestricted potential to emit VOC has been calculated based as follows:

$$(0.0675 \text{ pounds/hour}) \times (1 \text{ ton}/2000 \text{ pounds}) \times (8,760 \text{ hours/year}) = (0.295 \text{ tons/year})$$

The average HAPs emission rates have been projected to be 2.32818E-08 pounds of benzene per gallon remediated, 9.1844E-08 pounds of chloroethane per gallon remediated, 5.34814E-07 pounds of ethyl benzene per gallon remediated, and 2.09604E-07 pounds of toluene per gallon remediated. The annual amount of gallons remediated is projected to be 1.80E06 gallons per year.

The unrestricted potential to emit benzene has been calculated as follows:

$$(2.32818\text{E-}08 \text{ pounds/gallon}) \times (1.80\text{E}06 \text{ gallons/year}) = (0.042 \text{ lbs/year}) / (2000\text{lbs/ton}) = (0.00002 \text{ tons/year})$$

The unrestricted potential to emit chloroethane has been calculated as follows:

$$(9.1844\text{E-}08 \text{ pounds/gallon}) \times (1.80\text{E}06 \text{ gallons/year}) = (0.171 \text{ lbs/year}) / (2000 \text{ lbs/ton}) = (0.00009 \text{ tons/year})$$

The unrestricted potential to emit ethyl benzene has been calculated as follows:

$$(5.34814\text{E-}07 \text{ pounds/gallon}) \times (1.80\text{E}06 \text{ gallons/year}) = (0.995 \text{ lbs/year}) / (2000 \text{ lbs/ton}) = (0.00050 \text{ tons/yr})$$

The unrestricted potential to emit toluene emissions has been calculated as follows:

$$(2.09604\text{E-}07 \text{ pounds/gallon}) \times (1.80\text{E}06 \text{ gallons/year}) = (0.390 \text{ lbs/year}) / (2000\text{lbs/ton}) = (0.00019 \text{ tons/yr})$$

Therefore, the total potential to emit of the combination of HAPs is 0.00080 tons per year.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	-
PM ₁₀	-
SO ₂	-
VOC	0.295

CO	-
NO _x	-

HAPs	Potential To Emit (tons/year)
Benzene	0.00002
Chloroethane	0.00009
Ethyl Benzene	0.00050
Toluene	0.00019
TOTAL	0.00080

Note that the potential to emit of the remediation system is less than the 1 megagram (1.10 ton) per year limit required to be shown pursuant 40 CFR 63.7881(c)(1).

Justification for Modification

- (a) The Part 70 Operating Permit is being modified through a Part 70 Significant Source Modification to a yet to be issued Part 70 Operating Permit because the modification will require record keeping pursuant to 40 CFR 63.7881(c) in order to render the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG not applicable to the groundwater remediation system. Pursuant to 326 IAC 326 IAC 2-7-12(d), significant changes to the record keeping requirements of a Part 70 source requires a Part 70 Significant Permit Modification.
- (b) Since the Part 70 Operating Permit for this source has not been issued, the approval of this Significant Source Modification will satisfy the requirements of 326 IAC 2-7-12(d) and require this source to comply with the record keeping requirements of 40 CFR 63.7881(c).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2001 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	Greater than 250
PM ₁₀	741
SO ₂	3,384
VOC	628
CO	22,838
NO _x	248
HAP(Lead)	0.300

County Attainment Status

The source is located in Warrick County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Warrick County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Warrick County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 250
PM ₁₀	Greater than 250
SO ₂	Greater than 250
VOC	Greater than 250
CO	Greater than 250
NO _x	Greater than 250

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of one hundred (100) tons per year or more, and since this source is a primary aluminum reduction source, it is one of the 28 listed source categories.

These emissions are based upon Alcoa Inc., Warrick Operations Annual Source Emission Statement.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Pollutant	PM (tons/yr)	PM ₁₀ (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _x (tons/yr)	HAPs (tons/yr)
Proposed Groundwater Remediation System	-	-	-	0.295	-	-	Total Less Than 1.10
PSD Significant Level	25	15	40	40	100	40	-

Note that 1 megagram is equivalent to 1.10 tons.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source submitted their Part 70 (T 173-6627-00007) application on September 19, 1996. The groundwater remediation system is being reviewed under this permit and shall be incorporated into the submitted Part 70 application.

Federal Rule Applicability

- (a) This significant source modification does not involve a pollutant-specific emissions unit as defined in 40 CFR 64.1 for VOC:
- (1) with the potential to emit before controls equal to or greater than the major source threshold for VOC;
 - (2) that is subject to an emission limitation or standard for VOC; and
 - (3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this modification.

- (b) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (c) The proposed modification is subject to the National Emission Standards for Hazardous Air Pollutants: Site Remediation, 40 CFR 63, Subpart GGGGG because this source will be conducting site remediation and this source is a major source of HAPs. The final Maximum

Achievable Control Technology Standard (MACT) at 40 CFR 63, Subpart GGGGG for Site Remediation was published in the Federal Register on October 8, 2003.

However, as part of this modification, pursuant to 40 CFR 63.7881(c), the groundwater remediation system is exempt from the requirements CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG if the groundwater remediation system meets the following requirements:

- (1) Pursuant to 40 CFR 63.7881(c)(1), before beginning site remediation, the Permittee shall determine that the remediation material being excavated, extracted, pumped or otherwise removed during the Permittee's site remediation will not contain a total quantity of the HAP listed in Table 1 of 40 CFR 63, Subpart GGGGG equal to or greater than 1 megagram (1.10 tons) per year.

Note that since a remediation system study was conducted on October 3 and 4, 2003 in accordance with 326 IAC 2-1.1-3(h)(3)(E), Alcoa, Inc. - Warrick Operations has complied with the requirements of 40 CFR 63.7881(c)(1). The study showed that the remediation material being excavated, extracted, pumped or otherwise removed will have a total quantity of the HAP listed in Table 1 of 40 CFR 63, Subpart GGGGG of less than 1 megagram per year. Thus, the source has already demonstrated compliance with 40 CFR 63.7881(c)(1).

- (2) Pursuant to 40 CFR 63.7881(c)(2), the Permittee shall prepare and maintain written documentation at the groundwater remediation system to support the determination used to demonstrate compliance with 40 CFR 63.7881(c)(1). The documentation shall include a description of the Permittee's methodology and data the Permittee used for determining the total HAP content of the material.
- (3) Pursuant to 40 CFR 63.7881(c)(3), the exemption from the requirements of 40 CFR 63.7882 through 40 CFR 63.7957, Subpart GGGGG, may be applied to more than one (1) site remediation as provided that the total quantity of HAPs listed in Table 1 of 40 CFR 63, Subpart GGGGG is less than 1 megagram per year from all site remediations.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

- (a) This source is one of the 28 listed source categories and therefore, fugitive emissions are counted toward the determination of PSD applicability.
- (b) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

326 IAC 2-4.1-1 (New Source Toxics Control)

This modification has a potential to emit of any single HAP less than ten (10) tons per year and has a potential to emit of total HAPs less than twenty five (25) tons per year. Therefore, the requirements of 326 IAC 2-4.1-1 do not apply to this modification.

Conclusion

The operation of this groundwater remediation system shall be subject to the conditions of the attached proposed Significant Source Modification No. SSM 173-18465-00007.